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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,827	04/12/2001	Martin Kowatsch	Q64035	1954
21971	7590	03/03/2004	EXAMINER	
WILSON SONSINI GOODRICH & ROSATI 650 PAGE MILL ROAD PALO ALTO, CA 943041050			PAK, SUNG H	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/832,827

Applicant(s)

KOWATSCH, MARTIN

Examiner

Sung H. Pak

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/07/2003 has been entered.

In view of the newly added limitations, a new ground of rejection is set forth in this office action.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayer (US 5,526,454) in view of Yanagawa et al (US 5,583,958).

Mayer reference discloses an optical device with all the limitations set forth in the claims, except it does not explicitly show optical fiber crossing portions. Specifically, Mayer reference discloses: an optical waveguide structure, having a branching planar

Art Unit: 2874

waveguide structure (Fig. 6), a waveguide material that is put into troughs formed in a substrate (column 10, claim 12); said waveguide material having a refractive index higher than the material delimiting the troughs (inherent characteristics of waveguiding material); wherein at least one fiber is partially inserted into the troughs (Fig. 6); wherein the waveguide structure is formed in the area between branching as fibers (Fig. 6); wherein the waveguide material is formed as an optical polymer (claim 12); wherein the substrate is formed as an organic film material (abstract).

On the other hand, Yanagawa et al reference explicitly show the crossing optical fiber portions (Fig. 5), wherein the optical fibers are coupled to optical circuit chips, which may include branching planar waveguides (Fig. 8). One of the ordinary skill in the art would find such crossing portions advantageous and desirable because it allows grouping of input/output optical fibers into/out of planar optical waveguide device based on any desired optical channel configurations. Therefore, it would have obvious to a person of ordinary skill in the art at the time the invention was made to modify Mayer device to have fiber crossing portions.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mayer (US 5,526,454) in view of Yanagawa et al (US 5,583,958) as applied above, and in further view of Itoh et al (US 6,115,515).

Mayer and Yanagawa et al references disclose optical waveguide structures with all the limitations set forth in the claims as discussed above, except they do not teach

Art Unit: 2874

the use of opto-electrical transducers to connect the waveguide structure to a circuit board.

Itoh et al, on the other hand, explicitly teaches the use of opto-electronic components to couple optical waveguide device to the mounting circuit structure (Fig. 4, column 5 line 32- column 6 line 35). Such arrangement is advantageous in providing compact and efficient coupling between electrical circuit component and optical waveguide communications device. Therefore, it would have been obvious to a person of ordinary skill in the art to modify Mayer and Yanagawa et al device to have opto-electronic transducer coupling the waveguide structure to the electronic circuit component. It would have been desirable to have a compact and efficient opto-electric coupling component.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (571) 272-2353. The examiner can normally be reached on Monday - Thursday : 6:30am-5:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

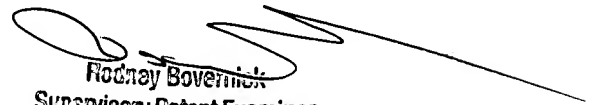
Art Unit: 2874

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sung H. Pak  
Examiner  
Art Unit 2874

sp



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